Benefits of early peanut introduction

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Clinical question

Does early peanut introduction in infancy influence the development of peanut allergy?

Bottom line

Early peanut introduction reduces the risk of peanut allergy in high-risk infants from 17.2% to 3.2% at 5 years. Normal-risk infants might also benefit. As 9% of high-risk infants were excluded owing to a positive skin prick test (SPT) result, it might be reasonable to investigate those at highest risk before exposure.

Evidence

- An RCT randomized high-risk infants (severe eczema, egg allergy, or both) aged 4 to 11 months (N = 640) to peanut consumption (6 g peanut/week) or avoidance.[1]
  -At 5 years, there were positive oral food challenge results for peanut in 3.2% of the consumption versus 17.2% of the avoidance group (number needed to treat of 8).
  -Harms included 7 of 319 infants reacting to a baseline food challenge in the consumption group (6 required antihistamines, 1 oral steroids). At 5 years, 1 child in the avoidance group required epinephrine after the oral food challenge.
  -Limitations included no placebo group and infants were excluded if their SPT results were greater than 4 mm (9% of infants).
- Another RCT randomized normal-risk breastfed infants (N = 1303) aged 3 months to early introduction of 6 allergens (eg, 2 g peanut/week) or avoidance of allergenic foods before 6 months.[2]
  -At 1 to 3 years of age, there was no significant difference in positive oral food challenge results for peanuts (1.2% in early group vs 2.5% in avoidance group).
  -Limitations included a complex protocol that led to statistically significant differences in adherence (avoidance, 93%; early introduction, 43%), and exclusion of infants with peanut sensitization (SPT results >0 mm).
- An observational study followed newborns (N = 2124) to examine food introduction timing and sensitization.[3] Peanut avoidance during the first year increased risk of sensitization (SPT results >2 mm) (odds ratio of 1.76; 95% CI 1.07 to 3.01).
  -Limitations included potential recall bias, and confirmatory oral food challenges were not done.

Context

- The early exposure hypothesis came from the 10-fold lower risk of peanut allergy among Israeli children compared with UK children despite greater intake of peanuts during infancy (7.1 g/month vs 0 g/month).[4]
- A large cohort study (N = 10 907) suggested lower odds of peanut allergy in offspring of nonallergic mothers with increased peanut consumption during pregnancy of 5 times per week or more versus less than once per month (odds ratio of 0.31; 95% CI 0.13 to 0.75).[5]

Implementation

Infants with severe eczema or egg allergy are at highest risk, requiring allergy testing preferably by SPT before peanut consumption.[6] Peanut-specific blood immunoglobulin (Ig) E can also be measured, but anything above a level of 0.1 kUA/L does not rule out allergy. About 21% of infants with an IgE level below 0.35 kUA/L (generally considered negative) will have a positive oral food challenge result.[7] Infants with mild or moderate eczema or those without eczema or other food allergies do not require further evaluation.[6] Blood IgE testing for multiple foods is not recommended owing to false-positive results. Guidelines and recipes for introducing peanuts are available.[6]

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Competing interests
None declared

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